

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

58525.00004.UTL

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Signature _____

Typed or printed name _____

Application Number

09/809,030

Filed

March 16, 2001

First Named Inventor
Yuval BEN-ITZHAK

Art Unit

2131

Examiner

Jenise E. JACKSON

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record.

Registration number 46,633

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____



Signature

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for Trevor Q. Coddington, Ph.D., Esq.,
Reg. No. 46,633

Typed or printed name

(858) 720-2589/ (858) 720-2500

Telephone number

November 8, 2006

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Yuval BEN-ITZHAK)	Confirmation No. 5590
Serial No.:	09/809,030)	Examiner: Jenise E. JACKSON
Filed:	March 16, 2001)	Group Art Unit: 2131
For:	APPLICATION-LAYER SECURITY)	
	METHOD AND SYSTEM)	

PRE-APPEAL BRIEF REQUEST FOR REVIEW**Mail Stop AF**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the final Office Action mailed on September 8, 2006, Applicant respectfully requests all rejections in view of the following remarks to be withdrawn. Applicant is submitting herewith a Notice of Appeal along with the requisite fee. Claims 1-54 are pending.

I. THE OBVIOUSNESS REJECTION

Claims 1-4, 11, 12, 15, 16, 20-22, 25-33, 36-43, and 46-54 stand rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over “AppShield Provides Block Against Application Hacks,” Report on Electronic Commerce, BRP Publications (“BRP”) in view of U.S. Patent No. 6,584,569 to Reshef, *et al.* (“Reshef”). Office Action at page 2. Of note, the Examiner contends that BRP teaches all of the claim limitations except for “designating an application path of an application as restricted.” *Id.* Applicant respectfully traverses this rejection on the following grounds.

A. There Is No Motivation To Combine BRP And Reshef.**i. The Proposed Modification Would Render AppShield Unsatisfactory For Its Intended Purpose Because AppShield And Reshef Are Inoperable Together**

See Reply Dated June 15, 2006, pages 17-18 for a summary of the functionality of AppShield and Reshef, respectively. In sum, AppShield is an application layer firewall, whereas Reshef is a vulnerability scanner. The functionality of AppShield is premised on the fact that outgoing pages, and in turn the incoming requests for those pages, have met a security policy in place. Thus, unexpected incoming requests are rejected by AppShield. Dissimilarly, Reshef utilizes a scanning mechanism to identify and attack possible vulnerabilities. Combining AppShield with Reshef would result in the

attacking mechanism of Reshef bombarding a web application protected by AppShield. In such a situation, AppShield would fail, as the expected incoming requests would in fact be the illegal requests generated by Reshef. Ironically, if Reshef and AppShield were combined, only benign incoming requests would be rejected by AppShield.

ii. AppShield's Principle Of Operation Would Change Because AppShield's "On-The-Fly" Security Policy Would Be Undermined By Combining AppShield And Reshef

AppShield's dynamic policy is generated "on-the-fly" from outgoing web pages; it does not utilize pre-identified information. See BRP lines 23-25. In contrast, Reshef utilizes a scanning mechanism to merely identify known, and variations of known, vulnerabilities. See Reshef at column 2, lines 24-28. Modifying AppShield to utilize previously identified information of known vulnerabilities would thus not only change AppShield's principle of operation, but would also be an unsatisfactory modification of AppShield, as AppShield is intended to adapt and respond to security vulnerabilities before they can be detected and addressed by traditional means, including the scanner disclosed in Reshef. See BRP, lines 17-21.

iii. Independent Claim 1

The Examiner's statement that "it would have been obvious...to include the application path of the application restricted with BRP publications..." is insufficient to support a finding of obviousness. See Office Action at pages 2-3. First, the statement is ambiguous and fails to properly convey the Examiner's reasoning to support a conclusion of obvious subject matter. Second, even the inclusion of the purported subject matter (i.e., an application path) does not fully address nor even reach the entire scope of the claimed invention, as the claimed invention expressly recites the step of "designating an application path of an application *as restricted*." (emphasis added). The Examiner fails to specifically address why it would have been obvious to include within AppShield an additional step of designating an application path as restricted.

iv. Independent Claim 27

The Examiner's contention that "it would have been obvious...to combine BRP with Reshef, both teaches protecting an application from hackers, the motivation to protect application from hackers is that a hacker can alter a parameter in an http request, and freeze the application" does not make logical sense. See Office Action at page 8. Furthermore, Reshef does not protect an application from hackers, it merely mimics what a hacker might do to discover vulnerabilities. See Reshef column 2, lines 24-28. Accordingly, the Examiner fails to properly address why, for claim 27, one of ordinary skill in the art would be motivated to combine BRP with Reshef.

B. The Proposed Combination Does Not Teach Or Suggest All Of The Claim Limitations.

i. Independent Claim 1

BRP, either taken alone or in combination with Reshef, fails to teach or suggest “designating an application path of an application as restricted,” as recited in claim 1. First, detecting and identifying a message, as disclosed in Reshef, is distinct from designating an application path. An application path is represented as a virtual directory or logical name. *See, e.g.*, specification, page 10, lines 7-10. The Examiner appears to have missed this distinction. *See* Office Action at page 13 (stating “wherein the application path *is* a virtual directory or subdirectory”) (emphasis added). An application path is a location of an application on a server. *See, e.g.*, specification, page 10, lines 9-10; page 10, line 8; Fig. 2D. An application path, as claimed, can be represented by a message, but it is not itself a message. *See* Reply Dated June 15, 2006, at page 21 for an example that makes the distinction clear. Wholly absent from Reshef and BRP is any disclosure regarding anything as specific as a location of an application on a server represented as a virtual directory or logical name. Second, Reshef only discloses mutating data and path parameters according to pre-defined vulnerability detection rules. *See* Reshef column 8, lines 61-67; column 9, lines 1-3 and 31-53. Certainly one of ordinary skill in the art does not equate mutating path parameters, as disclosed in Reshef, with the claimed step of designating an application path as restricted.

Also, BRP and Reshef fail to teach, or suggest “matching an operation request to said application path” as claimed. Because BRP merely discloses protecting an e-commerce application, it is impossible to know if BRP matches incoming requests to application paths, to a destination server, or something else all together. Indeed, without such minimal disclosure, one cannot know whether BRP conducts any matching at all. It is entirely unreasonable to suggest that BRP teaches anything as specific as matching an operation request to an application path, as claimed. Reshef fails to cure the deficiencies of BRP at least because, as discussed above, Reshef identifies messages rather than application paths.

Finally, BRP and Reshef fail to teach or suggest “determining whether said application request is illegal or harmful to an environment of said application according to security settings designated from said application path.” The Examiner acknowledges AppShield does not designate an application path as restricted, but asserts AppShield does designate security settings for an application path. *See* Office Action page 2. Thus, the Examiner makes an improper distinction between an application path having security settings and being restricted. For an application path to have designated security settings, it must be designated as restricted; an application path without any designated restrictions would have no designated security settings whatsoever. It follows that AppShield cannot teach or suggest this step.

Reshef does not cure the deficiencies of BRP, as Reshef has absolutely no teaching or suggestion regarding designating an application path of an application as restricted.

ii. Independent Claim 27

Independent claim 27 recites “matching each operation request to an application path, wherein said application path is represented by a virtual directory or a subdirectory of said application; and determining whether each operation request is illegal or harmful to an environment of said application,” which is similar to the recitations discussed above and found in claim 1. As remarked above, BRP and Reshef fail to teach or suggest this step.

BRP and Reshef also fail to teach or suggest the claimed step of “applying one or more security pipes to each operation request, wherein the number and types of pipes applied to each operation request are based on said resolved destination node of each operation request.” Pipes are explicitly described as “security components” which “protect or monitor functionality.” *See* present specification, page 10, lines 26-27. BRP provides no specifics regarding how AppShield actually blocks application hacks, and Reshef is merely concerned with discovering vulnerabilities rather than preventing hackers from using such vulnerabilities. Neither reference teaches nor suggests anything as specific as a pipe, applying a particular set of pipes to an operation request, or applying a particular set of pipes to an operation request based on a resolved destination node of the operation request, all of which are claimed. Again, BRP and Reshef simply lack the essential details necessary to render this step obvious.

iii. Independent Claims 48 And 51

BRP and Reshef fail to teach or suggest the claimed “means for ascertaining an application path of said operation request,” and the Examiner does not identify any respective teaching, or suggestion of such. *See* Office Action page 9. As discussed above, the disclosure of BRP is too feeble to reasonably teach or suggest anything as specific as ascertaining an application path of said operation request. Reshef fails to cure the deficiencies of BRP, as Reshef only suggests identifying messages, which is wholly distinct from ascertaining an application path.

Also, BRP and Reshef fail to teach or suggest the claimed “means for embedding said operation request into a data format used by said application.” BRP does not touch on the subject of embedding operation requests into another data format, particularly one used by an application. The disclosure cited by the Examiner, *see* BRP lines 30-33, and indeed the BRP reference as a whole, fails to reasonably suggest to one skilled in the art embedding an operation request into a data format used by an application, as claimed. Reshef does not cure the deficiencies of BRP. Reshef only discloses receiving an operation

request for an application by the application itself; the step of embedding said operation request into a data format used by said application is thus extraneous and entirely outside the teaching of Reshef.

Finally, it follows from the discussion in Section I(B)(i) above that BRP and Reshef fail to teach or suggest the claimed "means for checking a contents of an operation request according to a predefined set of rules associated with an ascertained application path to identify if said operation request is illegal or harmful to an environment of an application."

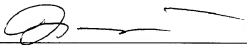
II. CONCLUSION

Because there is no motivation to combine BRP and Reshef, and because, even if combined, BRP and Reshef fail to teach or suggest all the claim limitations of the pending claims, Applicant submits that claims 1-4, 11, 12, 15, 16, 20-22, 25-33, 36-43, and 46-54 are not rendered obvious. Applicant respectfully requests the obviousness rejection of said claims to be withdrawn.

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number, in order to expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the present application.

Respectfully submitted,

Dated: 11/8/06

By: 
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